

SECTION 09 6700
DECORATIVE RESILIENT FLAKE POLYMERIC FLOORING SYSTEM
Dex-O-Tex Elastaflake RFS

PART 1.00 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Work of this Section as shown or specified shall be in accordance with the requirements of the Contract Documents

1.02 WORK INCLUDED

- A. Work of this section includes all labor materials equipment and services necessary to complete the decorative resilient flake polymeric flooring system as selected on drawings and/or specified herein.

1.03 RELATED WORK

(NOTE TO SPECIFIER: A FLUID APPLIED FILM FORMING CURING COMPOUND COMPLYING WITH ASTM C 309 OR ASTM C 1315 SHOULD BE APPLIED TO THE CONCRETE TO FACILITATE PROPER CURING OF THE CONCRETE SUBSTRATE. OTHER TYPES OF CURING COMPOUNDS ARE GENERALLY NOT ACCEPTABLE. CONCRETE SHOULD BE CURED FOR A MINIMUM OF 28 DAYS. ON GRADE FLOORS SHOULD HAVE FUNCTIONING VAPOR RETARDER BENEATH SLAB.)

1.04 SUBMITTALS

- A. General: Submit the following in accordance with conditions of Contract and Division 1 Specification Sections.
- B. Product Data: Submit manufacturer's technical data application instructions and general recommendations for decorative polymer flooring system specified herein.
- C. LEED Submittals:
 - 1. Product Data for Credit MR 4.1 and Credit MR 4.2: For products having recycled content, submit documentation indicating percentages by weight of postconsumer and pre-consumer recycled content.
 - a. Include statement indicating costs for each product having recycled content.
 - b. Include LEED Product Information Form for LEED Credits MR 4.1 and 4.2.
 - 2. Product Data for Credit EQ 4.2: For field applied, interior, paints coatings and primers, include printed statement of VOC content indicating compliance with Credit requirements.
 - a. Include LEED Product Information Form for LEED Credit EQ 4.2.
 - 3. Provide additional documentation for products as required to achieve each Credit(s).
- D. Samples for initial selection purposes in form of manufacturer's color charts showing full range of colors available including white and off-white colors.
- E. Samples for verification: for each resinous flooring system or color specified, provide 2 each, 6 inches (150mm) square samples in the selected color and texture, applied to a ridged backing by the installing contractor for this project.
- F. Material certificates signed by manufacturer certifying that the decorative resilient flake polymeric flooring system supplied for the project complies with requirements specified herein.
- G. Maintenance Instructions: Submit manufacturer's written instructions for recommended maintenance practices.
- H. Contractor Certification: Submit a letter from the primary materials manufacturer certifying that the installing contractor has been properly trained in the application of the materials being installed, and is acceptable to the materials manufacturer.

1. Engage an installer who employs only persons trained and qualified for accomplishing preparation and installation of the resinous flooring systems specified, including any sub-contractors performing work on the project.
2. Engage an installer who is certified in writing by the resinous flooring manufacturer as a factory trained applicator qualified to apply the specified resinous flooring system

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer or applicator who has specialized in installing resinous flooring types similar to that required for this Project The polymeric resinous flooring installation contractor shall have a minimum five year experience in the installation of similar materials and be a current SSPC member with a SSPC Society of Protective Coatings QP-8 certification And is acceptable to materials manufacturer. NOTE TO SPECIFIER: (See www.sspc.org/membership for certified QP-8 contractor member information).
- B. Acceptable Materials Manufacturers: Manufacturer shall certify that they are the primary formulator of the materials used in the completion of the work as specified herein. The materials manufacturer shall have a minimum 10 years experience in producing polymeric flooring materials. They shall also be a member of the SSPC Society of Protective Coatings and meeting SSPC ISO 9001 Quality Control manufacture requirements.

1.06 DELIVERY STORAGE AND HANDLING

- A. Deliver materials in original packages and containers with seals unbroken and bearing manufacturer’s labels containing brand name, directions for storage and mixing with other components.
- B. Store materials to comply with manufacturer’s directions to prevent deterioration from moisture. Store and temper materials to a temperature between 63°F -83°F for a minimum if 48 hours before commencement of the work.
- C. Lighting: Permanent lighting will be in place and working before installing polymeric floor coating.
- D. Moisture Vapor Emissions: Perform Calcium Chloride test in conformance to ASTM F 1869-09 to determine moisture vapor emission levels and in situ relative humidity test conforming to ASTM F 2170 in situ relative humidity in substrate prior to application of any component of the flooring system. Do not install flooring over substrate with moisture vapor emission levels in excess of 10 lbs. per 24 hour period over a 1000 square foot area or with a relative humidity in excess of 84%. Notify the Architect and Project Administrator immediately if MVE or rh levels exceed these levels.

PART 2:00 – PRODUCTS

2.01 MATERIALS

- A. Decorative resilient flake polymeric flooring system shall be Dex-O-Tex Elastaflake RFS as manufactured by Crossfield Products Corp. in Rancho Dominguez, California and Roselle Park, New Jersey.

2.02 PROPERTIES

- A. Colors: As indicated, or if not otherwise indicated, as selected by Architect from manufacturer’s standard colors, which must include white and off-white.
- B. Physical Properties: Provide floor coatings system that meets or exceeds the listed minimum physical property requirements when tested according to the referenced standard test method in parentheses.

Thickness	1/8”
Hardness (ASTM D2240), Shore D	80 - 85
Adhesion (ASTM D7234) (100% failure in Concrete)	>473 psi
Tensile Elongation (ASTM D412)	500%

Tensile Strength (ASTM D412)	1050 psi
Thermal Shock (ASTM D1211)	Complies
Waterproofness (Sample Exposed to 50 psi water pressure for one hour)	No Water Transmission
Water Resistance (MIL-PRF-1044)	16 mg
Microbial Resistance (ASTM G21)	Passes Rating 1
Moisture Absorption	< 0.4%
Indentation Resistance (2,000 psi 1 Hr.)	< 0.3%
Fire, Critical Radiant Flux (ASTM E648)	0.75 W/cm ²
Smoke Density (ASTM E 662)	< 183 D _s
Chemical Resistance (ASTM D1308)	
Gasoline	No Effect
Kerosene	No Effect
Skydrol	No Effect
Isopropyl Alcohol	No Effect
Toluene	No Effect
Hydrogen Peroxide	Slight Stain
Hydrochloric Acid (25%)	No Effect

PART 3.00 – EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions where the decorative resilient polymeric flooring system is to be installed and notify the Architect of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected by the Contractor in a manner acceptable to the Architect.
- B. Job Site Pre-Installation Survey
 1. Perform moisture testing in accordance with ASTM F 1869, and ASTM F 2170. Verify and document result in accordance with the specification. If the MVER exceeds 10 lbs. or the relative humidity (RH) of the substrate is greater than 84%, apply Dex-O-Tex Vapor Control 200 as per manufacturer's application specification before proceeding.
 2. Inspect Substrate to verify proper preparation and detailing before applying any materials.
 3. Measure and record ambient temperature and humidity, surface temperature and the temperature of the material being used at the start of work, mid-day and at the commencement of work each day. Do not proceed with the application if the conditions are outside the recommended parameters. Inspect materials to be used. Verify material is the proper material and all components and sizes are correct. Inspect all containers and verify a proper factory seal with no signs of damage or leakage. Premix Liquid materials into a smooth homogenous blend before uses.

3.02 PREPARATION

- A. Substrate: Perform preparation and cleaning procedures according to flooring manufacturer's instructions for particular substrate conditions involved, and as specified. Prepare in accordance with SSPC SP 13/NACE No.6
- B. Concrete Surfaces: Shot blast, or power grind as required to obtain optimum bond of flooring to concrete. Remove sufficient material to provide a sound surface free of laitance, glaze, efflorescence, and any bond inhibiting curing compounds or form release agents. Remove grease, oil, and other penetrating contaminants.

Prepare substrate in accordance with SSPC SP 13/ NACE No.6. Repair damaged and deteriorated concrete to acceptable condition. Leave surface free of dust, dirt, laitance, and efflorescence. Perform surface cleanliness test in conformance with ISO 8502 and a water break test.

- C. Materials: Mix epoxy and polymeric coating components when required and prepare materials according to flooring system manufacturer's instructions.

3.03 APPLICATION

- A. General: Apply each component of decorative flake polymeric flooring system according to manufacturer's directions to produce a uniform monolithic flooring surface.
- B. Environmental Check Points: Measure and record ambient temperature, relative humidity, dew point, surface temperature, and material temperatures at the beginning of work, mid-day, and at the work day.
- C. Cordon of the area of the work, provide warning tape and barriers to prohibit traffic in the area during the installation. Protect all adjacent areas or equipment from coatings materials being applied.
- D. Crack Repair: For Cracks over 1/6" wide after surface preparation.
 - 1. Route top of crack to be 1/2" X 1/4" minimum. Insure all walls of the fracture are clean dry and free from all contaminates, use grinder blade to clean side walls if required.
 - 2. Prime down into the prepared fracture and extending out a minimum of two inches on both sides of the fracture.
 - 3. Apply second coat into crack to fill areas that have settled from the first application. Continue application a strip coat which extends out a minimum of two inches on both sides of the fracture. Application shall be a minimum 40 mils dft at the center of the fracture extending out 2 inches. The edge may then be feathered out as required.
 - 4. If application is free from sink holes apply fiber reinforced fabric onto the surface of the strip coat application. If application has sink holes make another application before applying fabric reinforcement.

(NOTE TO SPECIFIER: For surface with excessive cracking or for additional protection from cracking apply Dex-O-Tex Cheminert SC Membrane over the entire surface at 40 mils dft.)

- E. Bond Coat: Apply VaporControl epoxy bond coat over prepared substrate at manufacturer's recommended spreading rate for the MVER and RH level of the substrate. Allow to cure, apply the subsequent coat within 24 hours.
- F. Basecoat: Over bond coat apply nominal 80 dft thickness Elastaflake Basecoat by gauge rake or notched squeegee, then roll with a spiked roller to aid in air release and increase flow ability, Loop roll to even out inconsistencies if required. Measure thickness by measuring with a mil gauge a minimum of every 100 square feet. Verify thickness by material coverage of 20 square feet per gallon. Allow to cure, apply the subsequent coat within 48 hours.
- G. Color/Receiving coat: Once the Basecoat is full cured, Apply color coat with a notched squeegee at a thickness of approximately 12 mils, then backroll with 1/4" mohair roller. Allow to flow out and settle. Then while the color coat is still wet, broadcast PVC color chip into the wet resin to the desired density and color combination as selected and approved. Allow to cure, apply the subsequent coat within 48 hours.
- H. After the receiving coat has fully cured, remove all excess color chips. Lightly sand the surface with 120 – 200 grit screen. Vacuum all remaining color chips and residue created by screening the surface. Inspect the entire area for any irregularities or defects and address them as required by proceeding to sealing the surface.
- I. Finish Coats: apply two coats clear polyaspartic enamel at a thickness of approximately 12 mils per coat over the cured color and PVC broadcast. Lightly sand between coats. Allow the first coat to cure, apply the subsequent coat within 18 hours.

(OPTIONAL: NOTE TO SPECIFIER: VARIOUS OPTIONAL TOP COATS ARE AVAILABLE FOR SPECIFIC PERFORMANCE CRITERIA OR ESTHETIC REQUIREMENTS. PLEASE CONSULT CROSSFIELD PRODUCTS CORP. FOR ASSISTANCE IN SELECTION OF OPTIONAL TOP COATS.)

- J. Cove Base: Apply cove base mix to wall surfaces at locations shown to form cove base height of 4 inches unless otherwise indicated. Follow manufacturer's printed instructions and details including taping, mixing, troweling, and sanding, of cove base

3.04 CURING, PROTECTION AND CLEANING

- A. Cure polymeric floor coating materials according to manufacturer's directions, taking care to prevent contamination during application stages and before completing curing process. Close application area for a minimum of 24 hours.
- B. After the floor has fully cured protect the floor with a 4 mil visqueen, and construction paper. Tape all seams and edges. If the area will be subject heavy rolling loads during construction, further protect the area with 1/8" Masonite taped at all seams and edges.
- C. Do not expose the floor to excess traffic, chemicals, water or heat for a minimum 96 hours.

END OF SECTION

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